CLAIMS

Sub A3

1. A method for treating and/or preventing glutamate-evoked cytotoxicity in a patient in need thereof comprising administering to said patient a composition containing a therapeutically effective amount of at least one beta-naphthoquinone derivative and a pharmaceutically acceptable carrier, wherein said derivative is selected among the group consisting of :

(i) compounds having the formula (I) :

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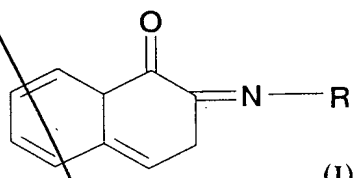

(I)

wherein R represents -NH-CO-NH_2, -NH-CO-CH_3, or -OH group, and

(ii) glucuronide derivatives thereof having the formula (II) :

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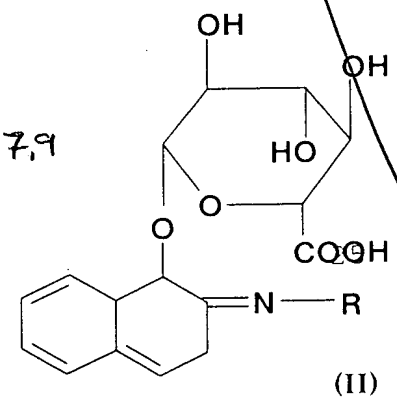


(II)

wherein R is as indicated in (i), and

(iii) addition salts thereof.

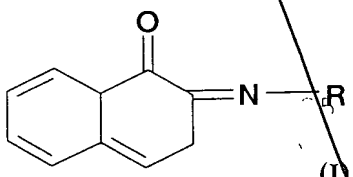
2. The method of claim 1, wherein said derivative is selected among the group consisting of the 1,2-naphthoquinone, 2-semicarbazone and the 1-(1-hydroxy,2-naphthyl)semicarbazide-1-β-O-gluco-pyranosiduronic acid.

3. The method of claim 1, wherein said glutamate-evoked cytotoxicity is a glutamate-evoked neurotoxicity.

4. The method of claim 1, wherein said glutamate-evoked cytotoxicity is neurodegeneration.

5. A method for modulating the release of glutamate in a patient comprising administering to said patient a composition containing a therapeutically effective amount of at least one beta-naphthoquinone derivative and a pharmaceutically acceptable carrier, wherein said derivative is selected among the group consisting of :

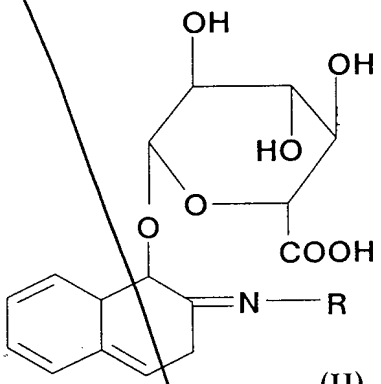
(i) compounds having the formula (I) :



(I)

wherein R represents $-NH-CO-NH_2$, $-NH-CO-CH_3$, or -OH group,

(ii) glucuronide derivatives thereof having the formula (II) :



(II)

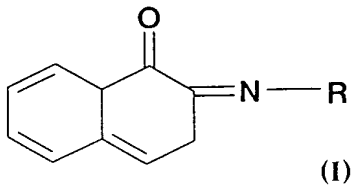
wherein R is as indicated in (i), and

(iv) addition salts thereof.

6. The method of claim 5, wherein said derivative is selected among the group consisting of the 1,2-naphthoquinone, 2-semicarbazone and the 1-(1-hydroxy,2-naphthyl)semicarbazide-1-β-O-gluco-pyranosiduronic acid.

7. A method for inhibiting the release of glutamate in a patient comprising administering to said patient a composition containing a therapeutically effective amount of at least one beta-naphthoquinone derivative and a pharmaceutically acceptable carrier, wherein said derivative is selected among the group consisting of :

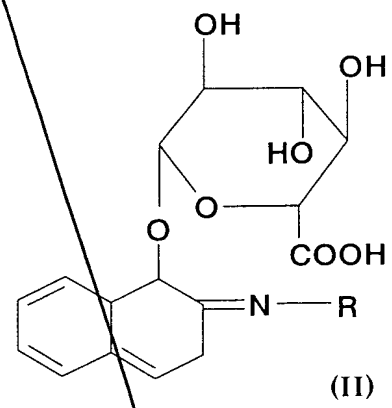
(i) compounds having the formula (I) :



(I)

wherein R represents -NH-CO-NH_2, -NH-CO-CH_3, or -OH group,

(ii) glucuronide derivatives thereof having the formula (II) :



(II)

wherein R is as indicated in (i), and

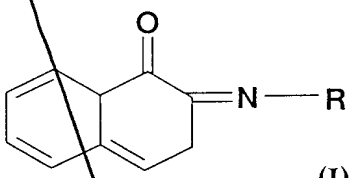
(v) addition salts thereof.

8. The method of claim 7, , wherein said derivative is selected among the group consisting of the 1,2-naphthoquinone, 2-semicarbazone and the 1-(1-hydroxy,2-naphthyl)semicarbazide-1-β-O-gluco-pyranosiduronic acid.

9. A method for treating and/or preventing disease and/or condition associated with the excessive release of glutamate in a patient comprising administration to said patient of a composition containing a therapeutically effective amount of at least one beta-

naphthoquinone derivative and a pharmaceutically acceptable carrier, wherein said derivative is selected among the group consisting of :

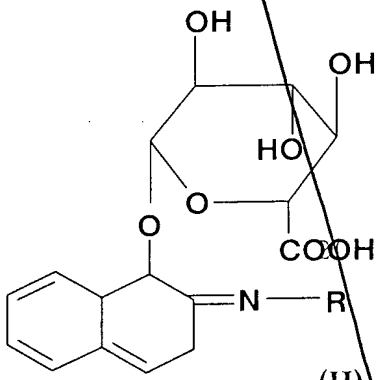
(i) compounds having the formula (I) :



(I)

wherein R represents $-NH-CO-NH_2$, $-NH-CO-CH_3$, or -OH group,

(ii) glucuronide derivatives thereof having the formula (II) :



(II)

wherein R is as indicated in (i), and

(iii) addition salts thereof.

10. The method of claim 9, wherein said derivative is selected among the group consisting of the 1,2-

naphthoquinone, 2-semicarbazone and the 1-(1-hydroxy,2-naphthyl)semicarbazide-1-β-O-gluco-pyranosiduronic acid.

11. The method of claim 10, wherein said disease and/or condition associated with the excessive release of glutamate is selected among the group consisting of epileptic seizures, acute and chronic neurodegenerative diseases, ischemia, Alzheimer's, Huntington's, Parkinson's diseases, multiple sclerosis (MS), amyotrophic lateral sclerosis (ALS), spinal muscular atrophy (SMA), retinopathy, stroke and traumatic brain injury, drug-induced neurotoxicity, pain, hormonal balance, blood pressure, thermoregulation, respiration, learning, pattern recognition, memory, and disorders subsequent to hypoxia or hypoglycaemia.